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LABS11-USERS MANUAL
VAX 11/750 VERSION

IWD-AR-WQB-85-71

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VAX 11/750 VERSION

INLAND WATERS DIRECTORATE

ENVIRONMENT CANADA

IWD-AR-WQB-85-71

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A copy will be available in French upon request.

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A B S T R A C T

This manual describes the use of the LABS-11 laboratory data management system on the VAX-11-750 computer.LABS-11 was orginally written for the PDP-11 series of computers and has been re-written to run on the VAX under the VMS operating system.Each program is explained with examples of user dialogue.

R E S U M E

Le présent guide décrit le mode d'utilisation du système de gestion des donnees de laboratoire LABS11 sur ordinateur VAX-11-750. A l'origine, le logiciel LABS11 était destiné à être utilisé sur un ordinateur de la série PDP-11. Ce logiciel a été adapté pour fonctionner sur le VAX en utilisant le système d'opération VMS. Des exemples concrets d'interactions avec le système sont présentés.

I N T R O D U C T I O N

This manual provides instructions for using various programs associated with the LABS11 Data Management System. The programs are written for use on the VAX 11/750 using BASIC version 2.2 as the programming language. These programs permit users to initialize samples into the system, produce laboratory worksheets, enter and validate analytical results, edit files and transfer results to the permanent files. Persons unfamiliar with this data management system should first read "LABS11 - A LABORATORY DATA SYSTEM".

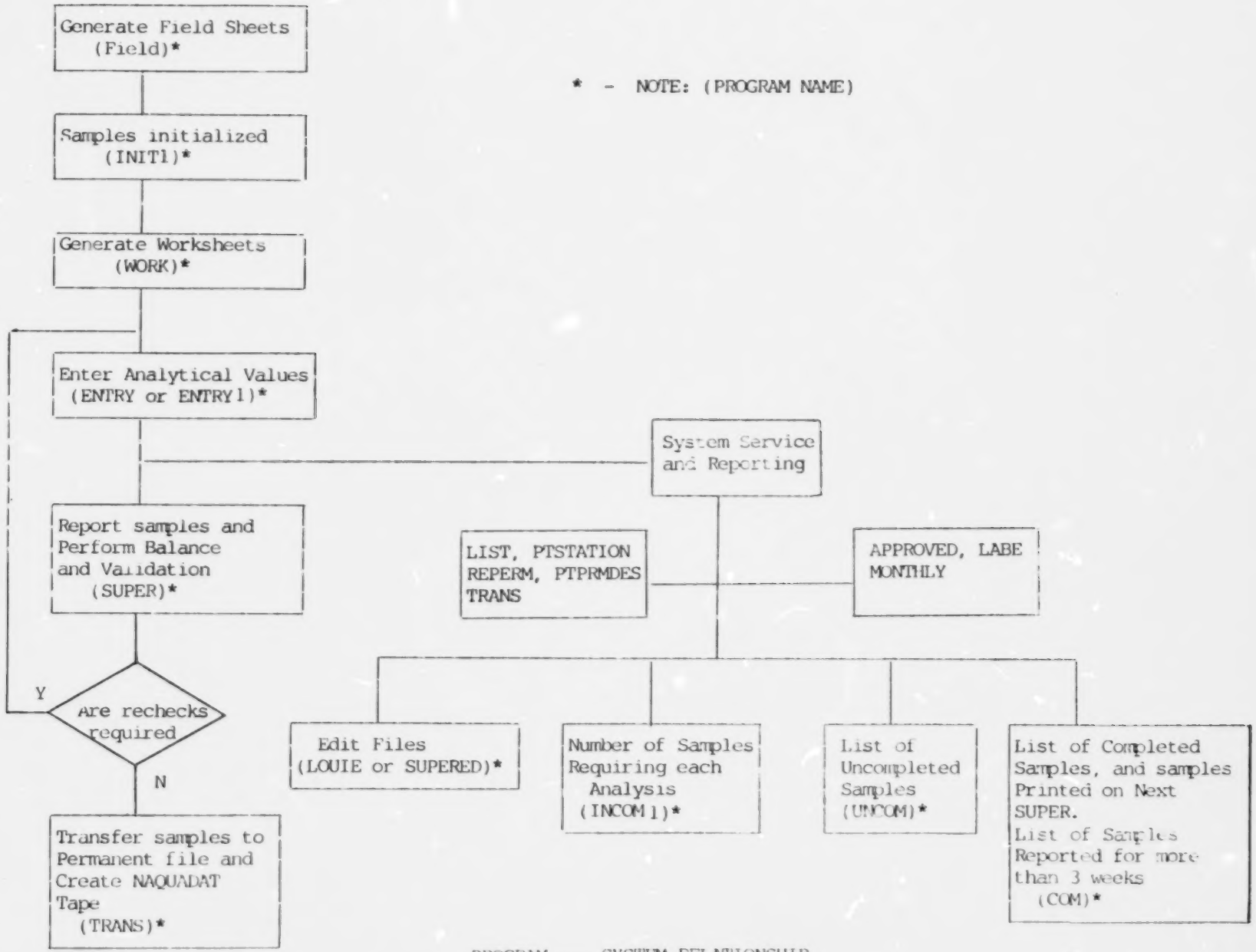
Appendix "A" (under separate cover) of this manual contains documentation and source code for the programs in the LABS11 DATA MANAGEMENT SYSTEM. This appendix is available upon request .

ACKNOWLEDGEMENT

The authors would like to thank L. Boulter for typing and the staff of the Water Quality Branch, Moncton, for their suggestions concerning this manual.

SECTION 1

GUIDES TO USING LABS11 PROGRAMS


Generate Field Sheets (Field)*
Samples initialized (INIT1)*
Generate Worksheets (WORK)*
Enter Analytical Values (ENTRY or ENTRY1)*
System Service and Reporting
Report samples and Perform Balance and Validation (SUPER)*
LIST, PTSTATION REPERM, PTPRMDES TRANS
APPROVED, LABE MONTHLY
Y
Are rechecks required
N
Edit Files (LOUIE or SUPERED)*
Number of Samples Requiring each Analysis (INCOM1)*
List of Uncompleted Samples (UNCOM)*
List of Completed Samples, and samples Printed on Next SUPER.
List of Samples Reported for more than 3 weeks (COM)*
Transfer samples to Permanent file and Create NAQUADAT Tape (TRANS)*

* - NOTE: (PROGRAM NAME)

PROGRAM --- SYSTEM RELATIONSHIP

A P P R O V E D . B A S

This program is designed to assist the Head Chemist in keeping track of approved and/or rejected samples, thus reducing the possibility of duplicate information being sent to the user.

To activate this program simply type RUN APPROVED, while in the LABS11 directory. The program will then display the main menu with the available options. Upon a valid entry the program will respond accordingly.

OPTIONS:

Option #1:

Add sample #'s to be reported.

Program prompts for SUB I.D. #. Enter it and press RETURN. Enter sample #'s for the I.D. # as follows:

a 6-digit # i.e. 320155

following digits may be less than 6, i.e. 156 is 320156.

A series may be entered as follows:

For 320125, 320126, 320127, may be entered as 320125-320127.

Note that 6 digits must be used on BOTH sides of the hyphen.

Enter '$' and 'RETURN' when finished entering sample #'s for the SUB. ID.

The program prompts for another SUB. ID. Continue until all SUB. ID's and sample #'s have been entered. To exit, press '$' and return at the SUB. ID prompt.

The main menu reappears.

Option #2:

Option 2 allows you to change a record manually after it has been stored.

After choosing #2, the program prompts for selecting either the SAMPLE file, which contains all of the SAMPLE #'s that have been input into the system, with SUB. ID's and dates, or the PROJECT file, which contains the corr. project #'s and descriptions for each SUB. ID.

File #2 is used to input new SUB. ID's or projects, or to modify existing project information.

File #1 is used when modifying info about sample #'s, etc.

Choose 1

We can delete or change a record. Choose 3. Enter the sample # of rec. you want to change. The old info appears on the screen. Enter the new info at the prompts. If 2 is chosen, enter the sample # of the record to be deleted.

If File 2 is chosen, an additional option is present. Press 1 and follow the prompts.

Option #3:

Option 3 of main menu is used to print a report of all samples entered in this session. Two reports are printed - a list of accepted sample #'s by SUB. ID grouping, and a list of samples already on file.

Use this after every <u>complete</u> session of entering sample numbers to get the results of the input.

Option #4:

Option 4 generates a month-end report.

The program asks whether you want to enter specific dates. If you answer 'N' (for No), the program prints a report of all SUB. ID groups entered between the 23rd of the previous month and the 22nd of the present month.

If you answer 'Y' (for Yes), then the program asks for a starting date and an ending date, in entries between the starting date and an ending date, in the form DDMMYY (i.e. DAY-MONTH-YEAR). All entries between the starting and ending dates will be reported.

Please Note: 0's, (ZEROS) must be entered when inputting a date. (i.e. May 8, 84 is 080584, not 8584.

Option #5:

Option 5 allows the user to check SNUMS.NEW for a specified sample or group of samples. The program will prompt the user to enter the sample number or numbers to locate, end the input with a '$'. The routine then searches through SNUMS.NEW keying on the entered sample number. If the sample is found, the message "SAMPLE NUMBER XXXXXX HAS BEEN APPROVED" will be printed. If the sample could not be located, the message "SAMPLE NUMBER XXXXXX IS NOT ON FILE" will be printed.

Option #6:

EXIT ends the program.

SAMPLE OUTPUT SEE TABLE - 12.

C O M . B A S

COM is a program that lists all completed samples on the LABS11 in-progress files. The only user input is to type RUN COM to activate the program. COM is normally run by the Data Clerk immediately preceeding a full SUPER and passed to the chemists for their use. Samples that will appear on that SUPER appear with an S immediately following the sample number.

NOTE:

For sample output, see table 6.

D U P T I M E . B A S

DUPTIME is a program that scans the sample parameter file (PARMS.NEW), checking for identical sampling dates/times for the same station number. The same station cannot have two samples with the same sampling date and time as the NAQUADAT system in Ottawa will not accept it. The program therefore checks for this possibility, and increments duplicate times by 1 minute until it is unique for that station and date.

This program is run automatically every night, but may be run by a user by typing RUN DUPTIME from the LABS11 directory. There are no prompts to answer, and no output.

EDITING PROGRAMS

SUPERED and LOUIE are file editing programs for the LABS11 in-progress files. The two programs are very similar, with LOUIE being essentially a more limited version of SUPERED. In the following descriptions, menu choices that are available only in SUPERED are designated by an asterisk (*) beside the entry. LOUIE users should keep this in mind when using the manual.

LOUIE will typically be used by the Data Processing Clerk to make changes to station or parameter descriptions and related information, to change a subid parameter list, to adjust the value of a parameter for a sample, or other types of changes that must be done to the record itself. This program is NOT intended for use in changing valid test values or dates of analysis, initialization, etc. Its primary purpose is to correct honest mistakes made in entering data. Note that dates and values, as well as most other sample data, can be changed to allow correction of mistakes.

SUPERED incorporates all features of LOUIE with a good number of additions and enhancements. More fields are open to change in this

program, as well as editing on additional files not supported by LOUIE. The permanent file PERM1 is a typical example. This file can only be edited, to a limited degree, by SUPERED. SUPERED will normally be restricted to use by the Systems Manager and programmers involved with the LABS11 system.

For LOUIE users requiring a change not supported by LOUIE, the Systems Manager should be advised, so the change can be made through SUPERED.

RUNNING THE PROGRAM

When logged into LABS11, type RUN LOUIE or RUN SUPERED to activate the appropriate program. You will then be prompted for the password. If the correct password is not entered within 15 seconds or three tries then the program automatically terminates.

Once the password has been entered and accepted, the main menu will appear as follows.

LABS-11 FILE EDITOR

MAIN MENU

(1) ADD TO A FILE

(2) DELETE A RECORD FROM A FILE

(3) EDIT RECORDS IN A FILE

(4) HELP

(0) EXIT

(1) ADD TO A FILE

Allows the addition of records to certain files in LABS11. For

example, to add a new parameter code, station number, or subid parameter list to the system this option would be used.

(2) DELETE A RECORD FROM A FILE

Allows the deletion of records from the appropriate file. This would be used to delete a parameter from a sample, to delete a sample altogether, or to delete a subid or parameter from their files.

(3) EDIT RECORDS IN A FILE

Allows the changing of data in the various files. For example, changing a date, value, station number, or virtually any other sample information would be done through here. In addition, changes to station descriptions, subid parameter lists or detection limits apply here.

(4) HELP

Calls up the HELP program. This contains descriptions of the files used in LABS11, including their record formats and type of information in each file. When in doubt about where to find a piece of information, call up the HELP routine.

(0) EXIT

Terminates program and returns to the operating system ('$' prompt).

A D D T O A F I L E

The following menu appears when option '1' is chosen from the main menu.

LABS-11 FILE EDITOR

ADD RECORDS

(1) PARAMETER DESCRIPTION FILE (PRMDES)

(2) STATION DESCRIPTION FILE (STNFIL)

(3) SUBID PARAMETER LIST (SUBPAR)

(4) PARAMETER FILE (PARMS)

*(5) SAMPLE.NEW FILE

(6) HELP

(0) RETURN TO MAIN MENU

(1) PARAMETER DESCRIPTION FILE

Allows addition of a new parameter to the description file, including detection limits.

PROMPTS:

ENTER PARAMETER CODE - '0' TO EXIT

Enter the 5 digit parameter code to be added, or a '0' to return the previous menu. ie. '02001' would add parameter code '02001' to the file.

ENTER PARAMETER DESCRIPTION

Enter the description for the parameter that is to appear on listing reports, up to a maximum of 40 characters. Include units in the description.

ENTER LOW LIMIT

Enter the lower detection limit for the parameter. ie. 2.0 means that no value less than 2.0 will be accepted for that parameter.

ENTER UPPER LIMIT

Enter the upper detection limit for the parameter. ie. 100.0 means that no values greater than 100.0 will be accepted for that paramter. If there is no upper limit then enter 999999.

ENTER LEFT

This is not used at present, so enter a zero.

ENTER SIGNIFICANT DIGITS

Enter the number of digits to the right of the decimal that are significant. ie., to enter a value of .001 this field must be at least 3.

The entries then appear on the screen. If they are correct, then type 'Y' and the message 'RECORD SAVED' will appear. You are then asked for another parameter code. Go back to number (1). If they are not correct then type 'N'. You will then go back to number (1). Enter the correct information, as described above.

(2) STATION DESCRIPTION FILE

Allows addition of a new station number to the file, along with its water resources station number and a description for the new station.

PROMPTS:

ENTER STATION CODE - '0' TO EXIT

Enter the station number to be added to the system, or '0' to return to the previous menu. The station number must be 12 characters long and must not already be on file.

ENTER GAUGE DESCRIPTION

Enter the water resources station number for the new station here. If there is no water resources number, then simply hit <RETURN> to skip it. The water resources number, if entered, must be 7 characters in length.

ENTER STATION DESCRIPTION

Enter up to 64 characters as a description for the station number. This information will appear on listing reports.

The station information will then appear on the screen. If the information is correct then enter a 'Y'. The message 'RECORD SAVED' will appear on the screen, and the user will be sent back to number (2). If

the information is not correct then enter an 'N'. The information will not be saved. The user is then sent back to number (2) so the correct information may be entered.

(3) SUBID PARAMETER LIST

Allows a new subid to be added to the system, along with its associated list of parameter codes. This list is used in initializing samples.

PROMPTS:

ENTER SUBID TO ADD - '0' TO EXIT

Enter the subid as 4 character combination of the qualifier and subid number. The first character is a qualifier used to identify a different list for that subid. For example, A211 and B211 are two different parameter lists for subid 211.

ENTER PARAMETERS ONE AT A TIME - TYPE '$' TO END INPUT

Enter the parameter codes for the subid as 6 character codes, typing <RETURN> after each one. When all parameters for that subid have been entered, type a '$' to indicate the end of the list. The subid and its list will be saved. The user is returned to number (3).

(4) PARAMETER FILE

Allows a parameter to be added to a sample. This is designed for use when, for example, a parameter was accidentally forgotten for a sample during initialization. The parameter may be entered with or without value and date of analysis.

PROMPTS:

ENTER SAMPLE NUMBER TO ADD TO - '0' TO END

Enter the six digit sample number that the parameter is to be added to. ie. 401215 will specify that the parameter is to be added to sample 401215.

ENTER THE PARAMETER CODE (6 characters)

Enter the six character parameter code that is to be added. ie. 10301L

ENTER THE ANALYSIS DATE IN FORM 02-JUN

Enter either the date of analysis if it has been done, or <RETURN> if the test has not yet been done. If the date is entered then it must be in the format specified. If no date is entered then the next two prompts do not appear.

ENTER THE VALUE

Enter the value of the analysis, including decimal point, to a maximum of 7 digits. ie. 2.3 is a value of 2.3 for that particular test for that sample.

ENTER THE QUALIFIER

If the value was either less than (L) or greater than (G) then enter the appropriate letter in this space. Note that the (L) or (G) does NOT appear in the value above, but in this field ONLY. If the value has no preceeding letter (L or G) then just hit <RETURN> for this prompt.

ALL ENTRIES CORRECT (YES OR NO)

If all entries were okay then enter YES and they will be saved. If not, then enter NO and the process above for number (4) will be repeated to allow the correct information to be entered.

*(5) SAMPLE.NEW FILE

This file contains the sample numbers of all samples that have been accessed through entry since the last SUPER. SUPER uses this file to determine what samples will be run on the next SUPER process. If a sample has been completed for some time but does not appear on any SUPER, it may be desirable to add the number to this file so that the sample WILL appear on the next SUPER.

PROMPTS:

ENTER THE SAMPLE NUMBER TO ADD - '0' TO EXIT

Enter the six digit sample number that is to be added to the file. A message will then be printed indicating that the number was either stored successfully or was already on the file. An entry of '0' here will return the previous menu.

D E L E T I N G F R O M A F I L E

Upon choosing option '2' from the main menu, the following menu will appear.

LABS-11 FILE EDITOR

DELETE RECORDS

(1) DELETE RECORD FROM PARAMETER FILE

(2) DELETE COMPLETE SAMPLE

(3) DELETE SUBID PARAMETER LIST

(4) DELETE FROM PARAMETER DESCRIPTION FILE

(5) HELP

(0) RETURN TO MAIN MENU

(1) DELETE A RECORD FROM PARAMETER FILE

Allows the removal of a parameter from a sample. This would be used, for example, to remove parameter 16309L from sample number 401215.

PROMPTS:

ENTER SAMPLE NUMBER TO DELETE FROM - '0' TO EXIT

Enter the six digit sample number the parameter is to be deleted from. ie. enter 401215 for the above example.

ENTER PARAMETER CODE (6 digits)

Enter the 6 character parameter code to be deleted from the sample number. ie. enter 16309L for the above example. (to be deleted from 401215) The parameter information is then displayed.

DELETE THIS RECORD (Y OR N)

Check the recheck number of the display. If this is the record to be deleted then enter 'Y'. A message will then be displayed to inform you of its deletion. If this is not the record to be deleted then enter 'NO'. The following prompts will then appear.

NEXT RECHECK RECORD (Y OR N)

If the recheck or next replicate for the parameter code is to be searched for, then enter 'Y' to the prompt. The recheck information will then be displayed and the option given to delete it. If the next record is not needed, then enter 'N' and no deletions will be made. If the next parameter is asked for but not found in the file, then a message to that effect will be printed.

(2) DELETE A COMPLETE SAMPLE

Allows the deletion of a sample number completely. Once this is done, the sample number no longer exists on the LABS11 in-progress files. This option should be used with care, as the only way to recover this deleted sample is to re-initialize the sample and re-enter all parameter results.

PROMPTS:

ENTER SAMPLE NUMBER TO DELETE - '0' TO EXIT

Enter the six digit sample number that is to be deleted. ie. to delete sample number '401255', enter '401255' to the prompt.

DELETE SAMPLE # XXXXXX (Y OR N)

Double check the sample number that you wish to delete. If the one displayed is the one that is to be removed from the files, then enter 'Y'. If not, then enter 'N'. If in doubt, enter 'N', since it can be deleted anytime but not recovered once it is gone. If 'Y' is entered, then messages are printed outlining the processes that are taking place in the deletion process.

(3) DELETE SUBID PARAMETER LIST

Allows the deletion of a subid number and its associated parameter list. This could be useful if a subid was no longer in

use, or if a parameter list had changed so drastically that it would be easier to enter in a new list than to edit the current one.

PROMPTS:

ENTER SUBID TO DELETE (4 characters) - '0' TO EXIT

Enter the 4 character subid that is to be deleted. ie. A254 would be a legal format for a subid. An entry of '0' at this point will return the previous menu. The subid and its parameter list are then displayed.

DELETE THIS RECORD (Y OR N)

If this is the subid list that is to be deleted then enter 'Y'. The list will be deleted and a message to that effect printed. If this is not the list to be deleted then enter 'N', and no deletions will take place.

(4) DELETE FROM PARAMETER DESCRIPTION FILE

Allows the removal of a parameter code and its associated description and limits from the LABS11 system. For instance, if parameter code 23456 was no longer being used, then it could be deleted from the system using menu option.

PROMPTS:

ENTER THE PARM CODE TO BE DELETED ~~~ - '0' TO QUIT

Enter the 5 digit parameter code that is to be deleted, ie. 23456. An entry of '0' at this point will return the previous menu.

DELETE PARM CODE # XXXXX - YES OR NO

If the displayed parameter code is the one to be deleted, then enter 'YES'. The code will then be deleted and a message to that effect displayed. If the code if not the one to be deleted, then enter 'NO' and no deletions will take place.

E D I T I N G F I L E S

When option '3' is chosen from the main menu the following menu will appear.

LABS-11 FILE EDITOR

EDIT RECORDS

	(1) PARAMETER FILE	(PARMS)
	(2) SAMPLE FILE	(TABLE)
	(3) PARAMETER DESCRIPTIONS	(PRMDES)
	(4) STATION DESCRIPTION FILE	(STNFIL)
	(5) SUBID PARAMETER LIST	(SUBPAR)
*	(6) PERMANENT FILE	(PERM1)
*	(7) TEMP3.DAT FILE	
	(8) HELP	
	(0) RETURN TO MAIN MENU	

(1) PARAMETER FILE

Allows the editing of a parameter and its associated information

for a sample. For instance, to edit the analysis date of parameter 26301P for sample number 401367, this option would be used.

(2) SAMPLE FILE

Allows the editing of data associated with a particular sample number. For example, to change the station number of sample 401367, this option would be used.

(3) PARAMETER DESCRIPTIONS

Allows the editing of data associated with a specific parameter code. Changing the detection limits of parameter 10101 would be a typical example of the use of this option.

(4) STATION DESCRIPTION FILE

Allows the editing of data associated with a specific station number. This option could be used to change the description of station number 00NB01AD0004, as a prime example.

(5) SUBID PARAMETER LIST

Allows the editing of the list of parameters for a specific subid. This would typically involve deleting or adding a parameter to the list for a given subid.

*(6) PERMANENT FILE

Allows the limited editing of data associated with a specific

sample number that is present on the permanent file. This option should not be required very often, as data on the permanent file should be relatively error-free.

*(7) TEMP3.DAT

Allows the editing of data on the TEMP3 file, used for monthly reports to the Head Chemist. Here again, editing of this file should not be required often, as the data in this file is inserted at the time of initialization of a sample and should be correct.

NOTE:

* Features only available in SUPERED program.

EDITING THE PARAMETER FILE

Option number '1' from the EDIT MENU.

PROMPTS:

ENTER SAMPLE NUMBER TO EDIT - 0 TO EXIT

Enter the six digit sample number that is to be edited, eg. 401592.

ENTER PARMCODE FOR SAMPLE - (6 digits)

Enter the six character parameter code that is to be edited for the above entered sample number. ie. 88900F would be typical.

The following menu will then appear on the screen.

SAMPLE	PARCODE	DATE	VALUE	QUAL	RECHECK
401952	88900F	27-JUL			0

*(1) PARCODE (2) DATE (3) VALUE

(4) QUALIFIER *(5) RECHECK

(6) NEXT MATCH (RECHECK) (0) EXIT

If one of the fields listed in the menu is to be altered, then enter the number of the selection. Enter the new value in the same format as the old. The exception to this is the value, which is automatically formatted to the proper format. Once the new value has been entered, the screen will reappear with the new values replacing the old.

Once all changes have been made, an entry of '0' will save the updated record and prompt for another sample number to edit.

NOTES:

If a special code is to be entered for the value, such as depleted (*DE**), then it must be entered in its proper format. The proper special codes and their formats are:

*DE**	- depleted	TRACE*	- trace result
CONF*	- confirmed	GCMS*	- confirmed by gcms
*CO**	- contaminated	*IN**	- interference
*TC**	- test cancelled		

The qualifier is automatically adjusted for these special codes.

If the value is a less than or greater than value, then only the

NUMERIC part of it is entered into the VALUE field of the record. The QUALIFIER field must be set to the 'L' or 'G' as appropriate for the value. If there is nothing special about the value then the qualifier field should be blank.

E D I T I N G T H E S A M P L E F I L E

Option number '2' from the EDIT MENU.

PROMPTS:

ENTER SAMPLE # TO EDIT - 0 TO EXIT

Enter the six digit sample number that is to be edited. An entry of 0 at this point will return the EDIT MENU. If the sample number entered is not on the file an error message will be printed.

The following menu will appear on the screen for a valid sample # - i.e.: 401592

SAMPLE	#PARM	SUBID	STATION	DATE/TIME	FREQ	TZONE	DESC
401592	22	T087	00NS01ED0005	8407091205	000	ADT	

*(1) # PARM (2) SUBID (3) STATION

(4) DATE (5) TIME (6) FREQUENCY

(7) DESCRIPTION (8) TIMEZONE (0) EXIT

If one of the fields listed is to be altered, then enter the number of the field. The new value should be entered in the same format as the old one. When all changes have been made to the record the new record can be saved by selecting '0' to exit. Control will then resume at the SAMPLE NUMBER prompt.

NOTES:

The # PARM field contains the number of parameters that are on the PARMS.NEW file for that particular sample. This field should be changed only after ensuring that changing it will not result in parameters being lost from the sample. Note that ALL programs in the LABS11 system that add or delete records from the PARMS.NEW file AUTOMATICALLY update the number of parameters counter in the TABLE.NEW record for that sample. Therefore, the editing routine for the counter should be changed ONLY in the case of the counter having been upset somehow, or if a record was either added or deleted by a non-LABS11 program that does not automatically update the record counters.

The SUBID field contains 4 characters. The last three are the 3-digit subid. The first indicates a triplicate sample. The first digit is set to 'T' for a triplicate and '0' for an ordinary sample.

E D I T I N G T H E P R M D E S F I L E

Option number '3' from the EDIT MENU.

PROMPTS:

ENTER PARM CODE TO EDIT - 0 TO EXIT

Enter the 5 digit parameter code that is to be edited. An entry of 0 here will return the EDIT MENU.

i.e.: Enter 10101.

The following menu then appears.

CODE	DESCRIPTION	LOW LMT	UP LMT	LEFT	SIGDIG
10101	ALKALINITY TOTAL (MG/L)	0.5	350	0	1

(1) DESCRIPTION (2) LOW LIMIT (3) UPPER LIMIT

(4) LEFT (5) SIGDIG (0) EXIT

If one of the fields is to be changed then enter the number of that field. Enter the new value(s). When all changes have been made and checked, enter '0 to save them. The program then returns to the PARM CODE TO EDIT prompt.

NOTES:

The LEFT field is not used at present and should therefore be left at a value of '0' for all parameters.

EDITING THE STATION FILE

Option number '4' from the EDIT MENU.

PROMPTS:

ENTER STATION NUMBER TO EDIT - 0 TO EXIT

Enter the 12 character station number that is to be edited. An entry of '0' at this point will return the EDIT MENU.

i.e.: Enter 00NB01AD0001

The following menu will then appear.

STATION	GAUGE	DESCRIPTION
00NB01AD0001	01AD002	SAINT JOHN R. AT CLAIR

(1) W.R. STATION # (2) DESCRIPTION

(0) EXIT

If one of the fields is to be changed then enter the number of the field. Enter the new value in the same format as the old one. When all

changes have been made enter '0' to savethem and return to the STATION NUMBER TO EDIT prompt.

NOTES:

The W.R. STATION # is a 7 digit number of the related Water Resources station. This will often be blank, but, if entered, it must be 7 characters long.

The station description may be any alpha-numeric text up to a maximum length of 64 characters.

E D I T I N G T H E S U B P A R F I L E

Option number '5' from the EDIT MENU.

PROMPTS:

ENTER SUBID TO PROCESS

Enter the 4 character subid that is to be edited. An entry of '0' here will return the EDIT MENU.

e.g.: Enter A211

The following menu will appear.

****

PARAMETER LIST FOR SUBID A211

0201 L 2011 L 1010 L 0207 L 1210 L 1910 L 1110 L 1030 L

1720 L 16304L 16309L 1410 L 0204 L 0610 L 0711 L 0760 L

2930 L 8230 L 3030 L 4830 L 2630 L 2530 L 1330 L

(1) ADD (2) DELETE (3) CHANGE (0) EXIT

To add a new parameter to the list, select '1'. Enter the new 6

character parameter code in response to the prompt. The new list will then appear on the screen.

To delete a parameter, choose option '2'. Input the 6 character parameter code that is to be deleted in response to the prompt. The list will reappear on the screen with that code removed.

To alter a parameter code, choose number '3'. First enter the parameter code that is to be altered in response to the first prompt. Then enter the new code that is to replace the old one, as a six character code. The list will then reappear with the changes made.

To save the changes and return to the ENTER SUBID TO PROCESS prompt, enter '0' for the selection.

E D I T I N G T H E P E R M A N E N T F I L E

(SUPERED ONLY)

Option number '6' from the EDIT MENU.

PROMPTS:

ENTER SAMPLE NUMBER TO EDIT - '0' TO EXIT

Enter the six digit sample number that is to be edited. An entry of 0 at this point will return to the EDIT MENU.

e.g.: Enter 400001

The following menu will appear.

SAMPLE	STN NUMBER	SDATE	STIME	IDATE	RDATE	TDATE	#PARM
400001	00NB00000000	840403	1201	0404	2704	2405	4

(1) SDATE (2) STIME (3) PARAMETERS

(0) EXIT

The editing of the permanent file is purposely very limited. Of the fixed portion, only the sampling date and time may be altered. If one of

these is to be changed, enter the number and enter the new value in the same format as the old. Note that all dates in this section are of the form DDMM. The sampling date is YYMMDD.

To alter the contents of one of the parameters for that sample, choose option number three. The following will then appear:

ENTER PARM CODE TO EDIT - '0' TO EXIT

Enter the six character parameter code that should be edited. An entry of '0' at this point will return the sample information menu.

e.g.: Enter 88900F

The following menu will then appear on the screen.

SAMPLE # 400001 PARAMETER # 88900F

ADATE	VALUE	QUAL	RECHECK

(1) ADATE (2) VALUE (3) QUALIFIER

(4) NEXT MATCH (0) EXIT

To alter the date of analysis, value or qualifier, choose the correct option and enter the new value EXACTLY in the same format as the

old one. The VALUE field is included - the value MUST be seven digits in length. Preceeding zeroes are therefore often necessary.

To get the next recheck or replicate for the same parameter code, choose number '4'. The same menu will then appear for the next match of the parameter.

An entry of '0' will save the changes and return to the sample information menu.

E D I T I N G T H E T E M P 3 F I L E

(SUPERED ONLY)

Option number '7' from the EDIT MENU.

PROMPTS:

ENTER SAMPLE NUMBER TO EDIT - '0' TO EXIT

Enter the six digit sample number that is to be edited. An entry of '0' at this point will return the EDIT MENU.

e.g.: Enter 400001

The following menu will appear.

SAMPLE #	STN NUMBER	SUBID	RDATE	IDATE
400001	00NB00000000	0099	12-DEC	03-Apr-84

(1) SUBID (2) DATE RECEIVED

(3) STATION (0) EXIT

If one of the fields is to be changed, enter the number of that field. Enter the new value in EXACTLY the same format as the old one. An entry of '0' at this point will return the ENTER SAMPLE NUMBER TO EDIT prompt.

NOTES:

The RDATE field must have the month as a 3 character abbreviation, all in upper-case letters.

E N T R Y . B A S

Entry is a program used to enter test results for a number of samples for a specific parameter code. The program handles rechecks, special codes for values, etc. These entered values are then entered into the PARMS.NEW file in the proper record.

When processing is underway, several messages may appear on the screen. When color (02011) is being entered the program will delete 16309L from any sample whose color value is less than 30. When pH (10301) is entered, all alkalinities (1011) are deleted for samples whose pH value is greater than 6; all samples with a pH value <= 6 have the (1010) code deleted. When turbidity (0207) is entered all samples whose turbidity value is => 3 have all residues deleted. (1040,1045,1050,1055)

The above paragraph is NOT applicable to subids 214, 145, or subid 205. These subids are, for one reason or another, exempt from these deletions.

PROGRAM PROMPT	USER RESPONSE
TYPE PARAMETER - 5 DIGITS - ENTER 'DONE' TO EXIT PROGRAM	Enter the 5 digit parameter code that values are to be entered for. An entry of 'DONE' will terminate the program.
IS THE PARAMETER: <description>	Enter YES or NO in response. If the description on the screen matches the test that was done, then enter YES, else enter NO.
ARE YOU ENTERING RECHECK VALUES	If the values entered are are to appear as rechecks on sample listings, then enter YES, else enter NO.
TYPE IN THE DATE OF ANALYSIS	Enter the date that the tests were done, in the form DD-MMM where DD is a 2-digit day and MMM is an abbreviation of the month of analysis. (3 chars)

TYPE IN SAMPLE # AND VALUE
TYPE $ WHEN FINISHED

Enter the sample numbers and the associated values one by one in the form SSSSSS-VVVVV where SSSSSS is the six digit sample number and VVVVV is the value of the analysis. If the value is less than or greater than a value then enter the L or the G before the value. The value may also be one of the accepted special codes. Note that not entering anything after the "-" causes the program to take the previous value entered. An entry of '$' ends the list and processing of entered samples begins.

DO YOU WANT A LIST OF THE VALUES - YES OR NO

If you would like the entries made to be displayed then type 'YES', otherwise answer 'NO'.

ARE THESE VALUES CORECT	If all values are correct, then answer 'YES'. If not, then enter 'NO'. You may then edit the data that was entered.
PLEASE WAIT AS THESE VALUES ARE PROCESSED	The program is now processing your entries. It will ask for another parameter code when it finishes. (1-2 minutes)

E N T R Y 1 . B A S

ENTRY1 is a program that allows the entering of parameter values for a specified sample number. Each of the parameters for the specified sample is displayed and the user given the opportunity to enter the value and date for it.

Please note that ENTRY1 does NOT support rechecks. Rechecks should be entered using ENTRY.

P R O G R A M P R O M P T	U S E R R E S P O N S E
ENTER THE SAMPLE NUMBER AS A SIX DIGIT NUMBER - TYPE '$' TO END	Enter the six digit sample # that is to be processed. An entry of '$' at this point will terminate the program.
PARAMETER XXXXXX ENTER VALUE, DATE METHOD OR <CR> TO SKIP	For each parameter that a value is to be entered for, enter the data as shown on the screen. For each parameter that a value is NOT to be entered for, hit <RETURN> to skip it.

PROCESSING OCCURRING -- PLEASE WAIT All parameters for this sample have been displayed. The data entered is now being saved.

F I E L D . B A S

FIELD is a program which generates field sheets,and provides the user the option of two types of field sheets. This program is used by field technicians to obtain field sheets prior to field trips.

OPTIONS:

1) REGULAR FIELD SHEET *
2) 14 BOTTLE FIELD SHEET *

P R O G R A M P R O M P T S	U S E R R E S P O N S E
DO YOU WANT: 1) REGULAR FIELD SHEET 2) 14 BOTTLE FIELD SHEET	Enter appropriate number for the desired field sheet. EX: Type "1" if you want the regular field sheet.
DO YOU WANT MORE THAN ONE COPY ??	Type "YES" or "NO". NOTE: If you type "YES" the program will prompt you to enter the number of copies required.

ENTER THE SUBID PRECEDED BY THE PROGRAM QUALIFIER	Enter QUALIFIER and SUBID EX: A205,or C211 NOTE: The program checks your entry and if invalid you will be asked to re-enter QUALIFIER and SUBID.
ENTER STATION #'S TYPE '$' WHEN DONE	Enter station number or numbers.Type "$" when all station numbers have been entered. NOTE: The first station number must contain all 12 characters.If the following numbers are the same except for the basin, sub-basin,or sequential number then you only have to type the characters from that point on EX: lst station number - 00NB01AD0001 .If the next number were 00NB01AR0015 then type AR0015.

NOTE:

* For sample output see table 3.

I N C O M 1 . B A S

INCOM1 is a program that lists all uncompleted parameter codes on file and the number of samples that have that parameter incomplete. The only user input is to type RUN INCOM1 from LABS11. INCOM1 is normally run by either the Data Clerk or one of the senior chemists to determine what parameters have a large number of tests to be done.

NOTE:

For sample output, see table 7.

I N I T 1 . B A S

INIT1 is a program that initializes samples for use by the LABS11 system. ALL samples to be handled by the system MUST be initialized with this program.

P R O G R A M P R O M P T S	U S E R R E S P O N S E
TYPE IN THE SAMPLE #	Type in the six digit sample number that is to be added.
TYPE IN THE STATION NUMBER	Enter the twelve character station number where the sample was taken.
TYPE IN A DESCRIPTION FOR THE SAMPLE	A description for the sample may be entered here. Note that if the sample description is the same as the station description then it is not necessary to enter it again.

DO YOU WANT TO INPUT ADDITIONAL INFORMATION	If additional information is required then enter YES, otherwise enter NO. If YES, another prompt asks for the information.
TYPE IN THE SUBID	Enter the subid for the sample as found on the field sheet.
IS SAMPLE A TRIPLICATE SAMPLE	YES or NO
TYPE IN SAMPLING DATE IN THE FORM	Enter the sampling date in format on screen.
TYPE IN SAMPLING TIME	Enter the time of sampling in the format on the screen.
TYPE IN THE TIME ZONE	Enter the appropriate time zone from the field sheet.

TYPE IN THE DATE RECEIVED	Enter the date that the sample was received in the format on the screen.
ENTER THE TYPE OF ANALYSIS	If the sample follows the standard parameter list for its subid then type '1'. If it a special list, then type '2'. If it has the same list as the previous sample then type '3'. Note that the previous sample list does NOT include field parameters and values.
ARE THERE ANY MORE PARAMETERS	Appears when '1' is used. If there are additional ones, enter YES, else enter NO.
WAS SAMPLE PRESERVED IN THE FIELD	YES or NO

TYPE IN THE PARAMETER CODES	Appears when '2' is used orwhen additional parameters are specified. Enter the list of parameter codes to add, ending with a '$'.
ARE THERE ANY FIELD VALUES	YES or NO
FIELD PARAMETER ==>	Appears when there are field parameters to add. Enter the parameter and value in the format specified. Type a '$' to indicate the end of the list.
SAMPLE # XXXXXX INITIALIZED WITH XX PARAMETERS	Indicates that the sample was successfully initialized with XX parameters.

I O N B A L . B A S

IONBAL produces an ionic balance report for a list of samples on the permanent file. This report is very similar to the ionic balance report generated by SUPER, but may be done after a sample has been transferred to the permanent file. To activate the program, type RUN IONBAL from the LABS11.PERM directory.

P R O G R A M P R O M P T	U S E R R E S P O N S E
INPUT THE SAMPLE #'S AS 6 DIGIT NUMBERS - TYPE '$' TO END LIST	Enter each sample number as a 6 digit number that is to be processed, using a '$' to end the list.

The reports will then be printed. For an example of the output from the program, see table 9.

L A B E . B A S

LABE.BAS is a lab efficient program that computes a number of time intervals for samples on the permanent file. The program uses the Date Sample Received Report Date, Transfer Data, and Analysis Date to calculate the various time intervals. If any of the required slates are missing the sample will be rejected.

To activate the program, simply type RUN LABE while in the PERM directory. The program will then display the options menu and allow you to enter your selection.

Option - #1:

When Option 1 is selected, the program will prompt the user to input the parameter codes to be used in the computation (max. 30), i.e. 02011L. Next the user is asked to enter the Starting date and Ending Date for the report in the format (YYMMDD). NOTE: YY refers to the sampling or fiscal year (APR 01 - MAR 31) not the calendar year. In this program Julian date refers to the sequential order within the sampling or fiscal year, i.e.: 820101 actually means JAN 1, 1983.

Once the report dates have been entered, the user is asked if the parameters are to be treated as a group. If the response is 'Y' then the program will compute the total number of tests involved, min, max, and average time intervals for the group of parameters. If the response is

'N' the program will compute the various time intervals for each parameter.

The user is now asked if he/she would like to verify the input. If response is 'Y' the program will display the input and inquire if changes are to be made, and if so what changes. When all changes are made the programs will search the permanent files and produce the appropriate output.

Option - #2:

When Option 2 is chosen, the user is asked to enter the Starting and Ending Dates for the report (YYMMDD). NOTE: 'YY' refers to the fiscal or sampling year, not the calendar year (i.e. 820101 refers to JAN 01, 1983). Once these dates have been entered the user is given the opportunity to verify the input. If the input is to be verified, the program will display the input and inquire what changes are to be made. When the input is correct, the program will compute the information and provide the appropriate output.

Option - #3:

For Option 3 the user is asked to enter the SUB ID or SUB IDs (max 18) for which the time intervals are to be computed, end the list with a '$'. The program will now prompt for the Starting and Ending Dates for the report (YYMMDD). Once these dates have been entered, the user is

asked if the input is to be verified. If the response is 'Y' the input is displayed and the program will inquire for the changes to be made. Once all changes are made, the program will provide a suitable output.

For sample outputs see Table - 10.

L I S T . B A S

LIST is a program to list all parameters and associated information for a sample or group of samples. This program will only produce a listing for samples which have not yet been transferred to the permanent files.

P R O G R A M P R O M P T	U S E R R E S P O N S E
TYPE NUMBER OF COPIES YOU WANT	Enter number of copies you desire. EX: If you type '3' then the program will produce 3 copies for each sample entered.
TYPE IN SAMPLE NUMBERS	Enter sample number or group of numbers. End by typing '$'. Sample numbers must be 6 characters,if not program will print an appropriate message.

The program will now print a listing or listings for the requested samples. If the requested sample cannot be found then the program will print an appropriate message.

NOTE:

For an example of output see table 2.

M O N T H L Y . B A S

MONTHLY is a program which produces a report of the number of samples per water type for each SUB. ID. This program is used by the Head Chemist to compile statistics for laboratory reports.

PROGRAM PROMPTS	USER RESPONSE
Enter Starting Date for Report (DDMmmYR)	Enter the Starting Date for Report. Ex: 01Jan84
Enter Ending Date for Report (DDMmmYR)	Enter the Ending Date for the Report. Ex: 10Aug84

Once the selection dates are checked for validity the program loops through the file and extracts the required information from the records that fall within the requested date range. When all records have been read the program will produce a suitable output.

For sample output see TABLE - 11.

O V E R C O M . B A S

OVERCOM is a program that generates a list of sample numbers that were completed more than 7 days ago that have NOT appeared on a SUPER. These sample numbers should be added to the SAMPLE.NEW file through SUPERED so that they may appear on the next run of SUPER. This program is normally run immediately following a SUPER run.

P R O G R M . B A S

This program produces a listing of a particular program or list of programs. The program allows the user to produce as many copies of the listing as required. The output consists of the following:

1) TITLE - "PROGRAM LISTING"

2) PROGRAM NAME - TODAY'S DATE

3) PAGE NUMBER

4) SOURCE CODE FOR REQUESTED PROGRAM

P T P R M D E S . B A S

This program will produce a hard copy listing of PRMDES.NEW. The program will print a title and page number on the first page, and a page number on all remaining pages.

FORMAT:

```
*-------------------------------------------------------------------*

                    PARAMETER CODE LISTING

      CODE        DSCRIPT      LOLMT      UPLMT      DECI

*-------------------------------------------------------------------*
```

CODE - Five Digit Parameter Code (i.e.: 02011)

DSCRIPT - Parameter Code Description - Max. 40 Characters

LOLMT - Lowest Value ENTRY.BAS will accept for that particular parameter

UPLMT - Highest Value ENTRY.BAS will accept for that particular parameter

DECI - Number of Allowable Digits to the right of Decimal Point

P T S T A T I O N . B A S

This program will produce a hard copy listing of STNFIL.NEW. The program will print a title and page number on the first page and a page number on all remaining pages.

FORMAT:

```
*-------------------------------------------------------------------*

                    STATION DESCRIPTION LISTING

      STA #              WRSTN #                STADES

*-------------------------------------------------------------------*
```

STA # - Water Quality Station # (i.e.: 00NB01AD0001)

WRSTN # - Water Resources Station # (i.e.: 01AD001) - where applicable

STADES - Description of Water Quality Station (Sixty-four Characters Max.)

R E P E R M . B A S

REPERM is a program to list the sample information for a sample on the permanent file. To activate the program, type RUN REPERM from the LABS11.PERM directory.

P R O G R A M P R O M P T	U S E R R E S P O N S E
DO YOU WANT A SAMPLE REPORT WITH:	Enter '1' if a report with all rechecks is required, or '2' if a list with only the final rechecks is needed.
DO YOU WANT TO LIST BY:	Enter '1' if station numbers are to be entered. In this case the date prompts will appear. Enter '2' if sample numbers are to be entered. In this case the date prompts will not appear.
INPUT STATION NUMBERS	Appears for option '1' above.

	Enter each station number as a 12 character number, ending the list with a '$'. The date prompt below then appears.
INPUT SAMPLE NUMBERS	Appears for option '2' above. Enter each sample as a six digit number, ending the list with a '$'. After entering the '$' processing begins immediately followed by the listings.
WOULD YOU LIKE TO ENTER STARTING AND ENDING DATES	If dates to search between are to be entered, then enter 'Y'. All samples for the station numbers entered will be checked and the ones between the dates specified will be listed. If 'N' is entered then all samples for the stations will be listed.
ENTER STARTING DATE IN FORM DDMMYY	Appear when 'Y' is answered to

ENTER ENDING DATE IN FORM DDMMYY

above question. Enter the starting and ending dates in the form shown.

Processing of the samples will then commence and the listings will be printed. For an example of the output, see table 8.

S U P E R . B A S

SUPER is the program that lists the sample information on a sample, produces the IONIC BALANCE report, and validates the data for the sample. This is normally run by the computing staff or the Data Clerk. Two modes are possible; manual and automatic. The automatic mode runs SUPER on completed samples that have not appeared on SUPER before. The automatic mode also adds the DATE OF REPORT parameter code (88901L) to the sample. The manual mode allows the entry of specific sample numbers, and produces the listing, balance, and validation reports. The date of report code is NOT added to the sample, and the status of the automatic SUPER file is not altered.

To activate the program, type RUN SUPER from the LABS11 directory.

P R O G R A M P R O M P T	U S E R R E S P O N S E
DO YOU WISH TO ENTER THE SAMPLE #'S TO BE USED — YES OR NO	If the sample numbers to be processed are to be entered manually, then enter 'YES'. Entering 'NO' to the prompt will cause SUPER to run automatically.

TYPE IN THE SAMPLE NUMBERS	Enter the sample numbers that are to be processed one at a time, ending the list with a '$'. A maximum of 30 numbers may be entered at one time.
DO YOU WISH TO USE INCOMPLETED SAMPLES -- YES OR NO	If incompleted samples are to be accepted enter. 'YES' Otherwise, enter 'NO' and only completed samples will be processed.

The SUPER output will then begin appearing. For an example of this output see table 4.

T R A N S . B A S

TRANS transfers completed samples from the LABS11 in-progress files to the permanent file. Only samples that are completed and have an '88901L' date of report code on it will be transferred. In addition, the program also writes to the NAQUADAT transfer tape.

To activate the program, type RUN TRANS from the LABS11.PERM directory. Note that the NAQUADAT tape MUST be mounted prior to running the program. This program is normally run by either the computing staff or the Data Clerk.

P R O G R A M P R O M P T S	U S E R R E S P O N S E
INPUT THE SAMPLE NUMBERS TO TRANSFER - '$' TO EXIT	Enter the sample numbers that are to be transferred, ending the list with a '$'. Each sample number should be a 6 digit number.

U N C O M . B A S

UNCOM is a program that lists all uncompleted samples on file. The user may specify the number of parameters to be printed. If the number of tests to be done is less than or equal to the number specified then all those uncompleted parameters are printed out. The value for this is typically 2. For a sample output, see table 5.

PROGRAM PROMPTS:	USER RESPONSE
YOU WANT ALL SAMPLES CHECKED BEFORE WHICH SAMPLE	Enter the highest sample number number that is to be checked. If all samples are to be checked then enter 999999.
TYPE IN THE NUMBER OF PARAMETERS TO BE PRINTED	Enter the number of parameters as was described above.

W O R K . B A S

WORK is a program to produce worksheets of samples that need a specific work done on them. The user enters a list of codes and the resulting report lists the samples needing that analysis done.

To run WORK, type RUN WORK from the LABS11 directory.

P R O G R A M P R O M P T S	U S E R R E S P O N S E
TYPE FIRST 2-5 DIGITS OF EACH PARAMETER - '$' AT END	Enter the first 2-5 digits for each parameter that a list is to be generated for. If '02' were to be entered, all parameters beginning with '02' would be listed, along with the samples requiring completion of that parameter. A separate list is generated for each unique 5 digit parameter code.

For an example of the output, see table 1.

SECTION 2

SAMPLE OUTPUT

L A B O R A T O R Y W O R K S H E E T

PARAMETER - 1010 L ALKALINITY TOTAL (MG/L) 28-Sep-84

SAMPLE #	VALUE	*	SAMPLE #	VALUE	*	SAMPLE #	VALUE
402237		*	402238		*	402239	
402240		*	402241		*	402242	
402265		*	402282		*	402283	
402284		*	402285		*	402286	
402287		*	402288		*	402289	
402290		*	402291		*	402292	
402293		*	402294		*	402295	
402312		*	402313		*	402314	
402315		*	402316		*	402317	
402318		*	402319		*	402320	
402321		*	402322		*	402323	
402324		*	402325		*	402326	
402327		*	402328		*	402329	
402330		*	402331		*	402332	
402333		*	402334		*	900000	
900001		*			*		

TABLE - 1

L A B S - 1 1 L I S T I N G

ANNAPOLIS R. @ BDG, WILMOT STN.

PAGE 1

NO: 401579

STATION: 00NS01DC0001 SUB I.D. 0099

DATE OF SAMPLING: 19-JUL-84 TIME: 11:20 AST

PARAMETER	VALUE	DESCRIPTION	DATE	R#
**********		Field Values **********		
02061F	22	TEMP. WATER (DEG.C.)	19-JUL	0
00600F	7.8	HACH D.O. (MG/L)	19-JUL	0
77160F	4.56	INST. PROV. DISCHARGE (M3/S)	19-JUL	0
88900F		DATE SAMPLE RECEIVED	26-JUL	0
**********		Lab Values **********		
10301L	7.3	pH (pH UNITS)	03-AUG	0
0204 L	-----	SPECIFIC CONDUCTANCE (USIE/CM)	------	0
0207 L	-----	TURBIDITY (JTU)	------	0
10101L	16.9	ALKALINITY TOTAL (MG/L)	03-AUG	0
0201 L	-----	COLOUR APPARENT (REL. UNITS)	------	0
20110L	10	CALCIUM - DISS (MG/L)	22-AUG	0
1210 L	-----	MAGNESIUM DISSOLVED (mg/l)	------	0
1910 L	-----	POTASSIUM DISSOLVED (MG/L)	------	0
1110 L	-----	SODIUM DISSOLVED (MG/L)	------	0
17205L	9	CHLORIDE DISSOLVED (MG/L)	16-AUG	0
16304L	-----	SULPHATE DISSOLVED (mg/L)	------	0
16309L	-----	SULPHATE DISSOLVED - BY IC (MG/L)	------	0
15413P	**DE**	PHOSPHORUS TOTAL (MG/L)	03-AUG	0
29305P	L.002	COPPER EXTRBL. (MG/L)	15-AUG	0
3030 P	-----	ZINC EXTRBLE (MG/L)	------	0
48302P	L.001	CADMIUM EXTRBLE (MG/L)	13-AUG	0
82302P	L.002	LEAD EXTRBLE. (MG/L)	16-AUG	0
13305P	.1	ALUMINUM EXTRBLE. (MG/L)	10-AUG	0
26304P	.56	IRON EXTRBLE (MG/L)	09-AUG	0
25304P	.04	MANGANESE EXTRBLE (MG/L)	09-AUG	0
06107L	6.9	CARBON DISS ORG-COLORIMETRIC (MG/L)	13-AUG	0
06581L	16	HUMIC ACID (MG/L)	20-AUG	0
0711 L	-----	NITROGEN DISSOLVED NO3 & NO2 (MG/L)	------	0
07601L	.76	NITROGEN TOTAL (MG/L)	07-AUG	0
09105L	L.05	FLUORIDE DISSOLVED (MG/L)	20-AUG	0
1410 L	-----	SILICA REACTIVE (MG/L)	------	0

****

NOTE:

*DE** = DEPLETED

APPROVED BY ----------

TABLE - 2

F I E L D S H E E T

SAMPLE # _____

STATION # 00NB01AR0018 ST. CROIX @ BARING RR BDGE -MID-RIVER

DATE OF SAMPLING DY-_____ MO-_____ YR-_____

TIME OF SAMPLING HR-_____ MI-_____ ADT-____ AST-____

SUBMITTER ID A205 SAMPLED BY _____

FREQ -_____ PREC -_____

PARAMETER	VALUE	DESCRIPTION
0206__	_____	TEMPERATURE
1030__	_____	PH
0204__	_____	SPECIFIC CONDUCTANCE (US/CM)
0810__	_____	DISSOLVED OXYGEN (MG/L)
97160F	_____	INST. PROV. DISCHARGE (CMS)
_____	_____	_____
_____	_____	_____

SAMPLE BOTTLES

1 -liter	MAJOR IONS	_____
500 - ml	METALS	_____
250 - ml	ORGANICS	_____
100 - ml	MERCURY	_____
50 - ml	PHOSPHORUS	_____
_____	_____	_____

ADDITIONAL INFORMATION _____

_____

TABLE - 3

F I E L D S H E E T

SAMPLE # _____

STATION # 00NB01AR0018 ST. CROIX @ BARING RR BDGE -MID-RIVER

DATE OF SAMPLING DY-_____ MO-_____ YR-_____

TIME OF SAMPLING HR-_____ MI-_____ ADT-____ AST-____

SUBMITTER ID A205 SAMPLED BY _____ _____

FREQ -_____ PREC -_____

PARAMETER	VALUE	DESCRIPTION
0206__	_____	TEMPERATURE
1030__	_____	PH
0204__	_____	SPECIFIC CONDUCTANCE (US/CM)
0810__	_____	DISSOLVED OXYGEN (MG/L)
97160F	_____	INST. PROV. DISCHARGE (CMS)
_____	_____	_____

SAMPLE BOTTLES _____

2 - liter	MAJOR IONS	_____	40oz (GLASS)	PET. HYDROCARBONS	_____
2 - liter	METALS	_____	40oz (GLASS)	PCB	_____
1 - liter	CYANIDE	_____	40oz (GLASS)	ORGANOPHOSHATES	_____
250 - ml	ORGANICS	_____	40oz (GLASS)	AMINOCARB	_____
250 - ml-amb.	SILVER	_____	40oz (GLASS)	HERBICIDES	_____
100 - ml-sov.	MERCURY	_____	40oz (GLASS)	PHENOLS	_____
50 - ml-sov.	PHOSPHORUS	_____	40oz (GLASS)	CHLORINATED HYDROC	_____
__ - _____	_____	_____	____ (_____)	_____	_____

ADDITIONAL INFORMATION _____

_____

TABLE - 3 (Cont'd)

NO. 30320H DUNK RIVER @ WALL ROAD 80

STATION # 00FE01CB0001 SUB I.D. 0099

DATE OF SAMPLING 14-DEC-83 TIME 14:15 AST

PARAMETER	VALUE	DESCRIPTION	DATE	R#
********** Field Values **********				
88900F		DATE SAMPLE RECEIVED	19-DEC	0
02041S	2.0	TEMP. WATER (DEG.C.)	14-DEC	0
88600F	8.1	HACH D.O. (MG/L)	14-DEC	0
97160F	4.9	INST. PROV. DISCHARGE (M3/S)	14-DEC	0
********** Lab Values **********				
02011L	**IN**	COLOUR APPARENT (REL. UNITS)	12-JAN	0
20110L	12.	CALCIUM - DISS (MG/L)	24-JAN	0
10101L	30.8	ALKALINITY TOTAL (MG/L)	20-JAN	0
26304P	4.2	IRON EXTRBLE (MG/L)	05-JAN	0
02061L	25.0	TEMP. WATER (DEG.C.)	11-JAN	0
10301L	6.2	pH (pH UNITS)	18-JAN	0
12107L	3.2	MAGNESIUM-DISS (MG/L)	24-JAN	0
19103L	3.3	POTASSIUM DISSOLVED (MG/L)	12-JAN	0
11103L	4.4	SODIUM DISSOLVED (MG/L)	12-JAN	0
02041L	116.	SPECIFIC CONDUCTANCE (USIE/CM)	11-JAN	0
17205L	8.6	CHLORIDE DISSOLVED (MG/L)	01-FEB	0
16304L	4.5	SULPHATE DISSOLVED (mg/L)	03-JAN	0
16309L	4.9	SULPHATE DISSOLVED - BY IC (MG/L)	24-JAN	0
14102L	4.6	SILICA REACTIVE (MG/L)	19-JAN	0
09105L	0.08	FLUORIDE DISSOLVED (MG/L)	27-JAN	0
25304P	0.34	MANGANESE EXTRBLE (MG/L)	06-JAN	0
29305P	0.004	COPPER EXTRBL. (MG/L)	30-JAN	0
30304P	0.01	ZINC EXTRBLE (MG/L)	05-JAN	0
48302P	L0.001	CADMIUM EXTRBLE (MG/L)	01-FEB	0
82302P	L0.002	LEAD EXTRBLE. (MG/L)	17-JAN	0
13302P	5.1	ALUMINUM EXTRBLE. (MG/L)	10-JAN	0
02073L	140.	TURBIDITY (JTU)	12-JAN	0
06107L	3.0	CARBON DISS ORG-COLORIMETRIC (MG/L)	22-DEC	0
06154L	7.9	CARBON DISS INORG-COLORIMETRC (MG/L)	22-DEC	0
07601L	1.5	NITROGEN TOTAL (MG/L)	29-DEC	0
07110L	1.8	NITROGEN DISSOLVED NO3 & NO2 (MG/L)	06-JAN	0
06581L	10.	HUMIC ACID (MG/L)	29-DEC	0
88901L		DATE OF REPORT	15-FEB	0
********** Recheck Values **********				
10301L	7.1	pH (pH UNITS)	29-FEB	1
07601L	1.8	NITROGEN TOTAL (MG/L)	11-APR	1
06107L	4.6	CARBON DISS ORG-COLORIMETRIC (MG/L)	11-APR	1
06107L	5.4	CARBON DISS ORG-COLORIMETRIC (MG/L)	17-APR	2
06581L	13.	HUMIC ACID (MG/L)	13-APR	1

DE = DEPLETED **CO** = CONTAMINATED **IN** = INTERFERENCE

APPROVED BY _____

TABLE - 4

I O N I C B A L A N C I N G

CALCULATED VALUES (PPM):

CO3= 0	HCO3= 37.5452	OH= 0	MG= 3.2

CONSTITUENTS (EPM):

CO3- 0	HCO3= .6154	CA= .0988	MG= .2632
F= .42112E-02	CL= .2426	NA= .1914	K= .0844
SO4= .0937	H+= .78803E-04		

SUM OF CATIONS	= 1.13788	CA+MG	= .862
SUM OF ANIONS	= 1.08451	CO3+HCO3+SO4	= .7091
SPEC. COND/100	= 1.16	SUM OF CONSTITUENTS/COND	= .57885
ANIONS-CATIONS=-.5336E-01= 2.401 %		TOTAL HARDNESS	= 43.1384
STANDARD DEV.	= .12331	NON CARBONATE HARDNESS	= 12.3384
NA ABSORPTION RATIO	= .290675	CO2	= 4.7402
% SODIUM	= 16.8208	SUM OF CONSTITUENTS (PPM)	= 67.1474
SATURATION INDEX	=-1.50313	STABILITY INDEX	= 10.1963

D. O. % SATURATION = 60.4503

CALCULATED ORGANIC ION CONCENTRATION: 52.989 UEQ/L

V A L I D A T I O N

TABLE - 4 (Cont'd)

L I S T O F I N C O M P L E T E D S A M P L E S O N F I
E

22-Aug-84 PAGE 1

SAMPLE #	STATION #	SUB ID	DATE OF SAMPLING	# OF TESTS	DESCRIPTION OF SAMPLE
302851 06076L	51NB01AF0010	0211	10-NOV-83	1	WASHADEMOAK LAKE
302852 06076L	51NB01AF0010	0211	10-NOV-83	1	WASHADEMOAK LAKE
302853 06076L	51NB01AF0010	0211	10-NOV-83	1	WASHADEMOAK LAKE
302938 89950L	00NF00000000	0085	15-SEP-83	1	MYRIOPHYLLUM (PLANT
302941 89950L	00NF00000000	0085	17-SEP-83	1	VALLISNERIA (PLANTS)
302944 89950L	00NF00000000	0085	17-SEP-83	1	WATER LILY ROOTS (PL
303228	00NB00000000	0211	21-DEC-83	5	KEMERER - BLANK
303230	00NB00000000	0211	21-DEC-83	4	KEMERER - BLANK
303456 06076L	51NB01AF0006	0211	05-OCT-83	1	REF.302221 @ GRAND R
303457 06076L	51NB01AF0006	0211	05-OCT-83	1	REF. 302222 @ GRAND
303458 06076L	51NB01AF0006	0211	05-OCT-83	1	REF.302223 @ GRAND R
303581 06076L	51NB01AF0007	0211	20-SEP-83	1	GREEN R. REF. 3019
303582 06076L	51NB01AF0007	0211	20-SEP-83	1	GREEN R. REF.3019
303583 06076L	51NB01AF0007	0211	20-SEP-83	1	GREEN R. REF.3019
303585 06076L	51NB01AD0006	0211	22-SEP-83	1	MADAWASKA R. REF.
303586 06076L	51NB01AD0006	0211	22-SEP-83	1	MADAWASKA R. REF.3
303587 06076L	51NB01AD0006	0211	22-SEP-83	1	MADAWASKA R. REF.
303772	00NB00000000	0211	10-DEC-83	3	GLACIER L. G B-5

TOTAL # OF INCOMPLETED SAMPLES BEFORE 304000 = 18
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L I S T O F C O M P L E T E D S A M P L E S O N F I L E

22-Aug-84 PAGE 1

SAMPLE #	STATION #	SUB ID	DATE OF SAMPLING	# OF TESTS COMPLETED	DESCRIPTION OF SAMPLE
301954	01NB01AF0007	0211	20-SEP-83	6	GREEN RIVER RESERVOI
301957	01NB01AF0007	0211	20-SEP-83	6	GREEN RIVER RESERVOI
301960	00NB00000000	0211	20-SEP-83	6	GREEN RIV RES SPIKE
301973	01NB01AD0006	0211	22-SEP-83	6	MADAWASKA R. HEADPON
302073	00NF00000000	0085	15-SEP-83	19	NF-6 MUSCLE
302114	00NF00000000	0085	15-SEP-83	19	AUGUSTIN R. (GESTOR
302208	01NB01AF0006	0211	05-OCT-83	6	GRAND FALLS HEADPOND
302210	01NB01AF0006	0211	05-OCT-83	6	GRAND FALLS HEADPOND
302213	00NB00000000	0211	05-OCT-83	6	SPIKE
302215	01NB01AH0009	0211	06-OCT-83	6	TOBIQUE RIVER HEADPO
302218	01NB01AH0009	0211	06-OCT-83	6	TOBIQUE RIVER HEADPO
302361	01NB01AH0010	0211	18-OCT-83	6	SISSON BRANCH RESERV
302364	01NB01AH0010	0211	18-OCT-83	6	SISSON BRANCH RESERV
302367	01NB01AG0002	0211	19-OCT-83	6	AROOSTOOK RIVER HEAD
302373	00NB00000000	0211	19-OCT-83	6	SPIKE
302376	01NB01AJ0003	0211	21-OCT-83	6	SJR @ BEECHWOOD
302574	01NB01A00019	0211	01-NOV-83	6	GRAND LAKE
302577	00NB00000000	0211	02-NOV-83	6	MACATQUAC SPIKE
302580	01NB01AK0019	0211	02-NOV-83	6	SJR @ MACTAQUAC
302583	01NB01AK0019	0211	02-NOV-83	6	SJR @ MACTAQUAC
302586	01NB01AK0009	0211	02-NOV-83	6	SJR @ FOKIOK
302589	01NB01AK0009	0211	02-NOV-83	6	SJR @ FOKIOK
302769	21NF02ZM0001	0214	26-OCT-83	6	BOTTLE # 20
302807	00NS01DN0001	0099	26-OCT-83	32	WALLACE RIVER AT TCH
302816	01NB01AP0010	0211	10-NOV-83	6	WASHADEMOAK LAKE
302841	00PE01CC0042	0243	15-NOV-83	31	WINTER RIVER SOUTH B
302883	01NB01AF0005	0099	14-NOV-83	38	SAINT JOHN RIVER AT
302891	00NB01AM0001	0099	18-NOV-83	31	NORTH BRANCH OROMOCT
302893	00NB01AR9901	0099	17-NOV-83	9	BLANK
302894	00NB01AM9901	0099	18-NOV-83	8	BLANK
302895	00NB01BK9926	0099	18-NOV-83	9	BLANK
302935	10NF02ZM0014	0214	09-NOV-83	24	F-DEEP
302977	00NS00000000	0246	15-NOV-83	13	5G-R2
303094	00NS00000000	0246	20-NOV-83	12	24-R1
303137	00NF02YC0001	0099	07-NOV-83	38	TORRENT RIVER NEAR M
303181	00NB01AN0001	0099	23-NOV-83	31	SALMON RIVER AT GASP
303208	00PE01CB0001	0099	14-DEC-83	36	DUNK RIVER @ WALL RO
303434	51NB01AJ0003	0211	21-OCT-83	13	REF.302384 @ BEECHWO
303435	51NB01AJ0003	0211	21-OCT-83	13	REF. 302385 @ BEECHW
303436	51NB01AJ0003	0211	21-OCT-83	13	REF.302386 @ BEECHWO
303438	51NB01A00019	0211	01-NOV-83	13	REF.302591 @ GRAND L
303439	51NB01A00019	0211	01-NOV-83	13	REF.302592 @ GRAND L
303440	51NB01A00019	0211	01-NOV-83	13	REF.302593 @ GRAND L
303444	51NB01AH0002	0211	19-OCT-83	12	REF. 302381 @ AROOST
303445	51NB01AH0002	0211	19-OCT-83	13	REF.302382 @ AROOSTO
303446	51NB01AH0002	0211	19-OCT-83	13	REF.302383 @ AROOSTO
303447	51NB01AP0010	0211	10-NOV-83	13	REF. 302851 @ WASHAD

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* * * * A T T E N T I O N * * * *

THE FOLLOWING SAMPLES WERE REPORTED MORE THAN 3 WEEKS AGO

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301954	301957	301960	301973	302208
302210	302213	302215	302218	302361
302364	302367	302373	302376	302574
302577	302580	302583	302586	302589
302769	302807	302816	302841	302883
302891	302893	302894	302895	302935
302977	303094	303137	303181	303208
303434	303435	303436	303438	303439
303440	303444	303445	303446	303447
303448	303449	303450	303451	303452
303459	303460	303461	303575	303675
303677	303678	303684	303685	303687
303695	303696	303749	303757	303759
303760	303836	303837	303838	303839
303883	303895	303991	303993	303994
303995	303996	304039	304040	304097
304146	304173	304253	400004	400007
400008	400009	400083	400111	400121
400122	400123	400125	400126	400127
400128	400129	400130	400203	400314
400315	400511	400516	400519	400539
400533	400538	400541	400543	400544
400567	400568	400579	400580	400581
400614	400616	400619	400620	400645
400648	400654	400655	400656	400657
400658	400660	400702	400708	400710
400718	400720	400723	400725	400726
400728	400732	400738	400772	400832
400836	400838	400850	400866	400871
400876	400880	400881	400882	400883
400884	400885	400910	400919	400920
400921	400922	400981	400984	401032

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TABLE 6 - (Cont'd)

400876	00NS01EE0014	0087	29-MAY-84	24	MOOSE PIT BROOK
400880	00NS01ED0022	0087	03-JUN-84	24	PEBBLELOGGITCH BROOK
400881	01NS01ED0010	0087	03-JUN-84	24	PEBBLELOGGITCH LAKE
400882	00NS01ED0005	0087	21-MAY-84	24	MILLS FALLS
400883	00NS01EE0014	0087	21-MAY-84	23	MOOSE PIT BROOK
400884	00NS01EE0014	0087	21-MAY-84	24	MOOSE PIT BROOK
400885	00NS01EE0014	0087	21-MAY-84	24	MOOSE PIT BROOK
400910	00NS00000000	0231	27-APR-84	23	GOLD RIVER
400919	00NS01EE0015	0087	04-JUN-84	23	POLLOCK BROOK
400920	00NS01EE0015	0087	04-JUN-84	21	POLLOCK BROOK
400921	00NS01ED0030	0087	04-JUN-84	23	RODGERS BROOK
400922	00NS01EE0014	0087	04-JUN-84	23	MOOSE PIT BROOK
400972	00NB01AR0001	0099	16-MAY-84	30	ST. CROIX AT MILLTOW
400973	00NB01AR0001	0099	16-MAY-84	30	ST. CROIX AT MILLTOW
400981	00NF02ZM0009	0214	09-JUN-84	14	BOTTLE # 11M
400984	00NF02ZM0009	0214	10-JUN-84	14	BOTTLE # 18 M
401014	00NB01BQ0004	0211	19-JUN-84	23	S. TOMOGONOPS R. @ H
401015	00NB01BQ0004	0211	19-JUN-84	23	S. TOMOGONOPS R. @ H
401016	00NB01BQ0004	0211	19-JUN-84	23	S. TOMOGONOPS R. @ H
401017	00NB01BQ0006	0211	19-JUN-84	38	TOMOGONOPS R. @ MOUT
401032	00NB01BQ9906	0211	19-JUN-84	8	BLANK
401314	00NS01DD0038	0211	04-JUL-84	3	CORNWALLIS R. @ WATE
401315	01NS01DC0008	0211	04-JUL-84	3	RAMSEY LAKE
401316	02NS01DC0004	0211	05-JUL-84	3	ANNAPOLIS R. @ MOCHE
401317	00NS01DC0091	0211	05-JUL-84	3	ANNAPOLIS R. @ AUBUR
401318	01NS01DD0006	0211	06-JUL-84	3	SILVER LAKE
401319	01NS01DD0006	0211	06-JUL-84	4	SPIKE
401479	01NS01DC0010	0211	10-JUL-84	3	NICTAUX RIVER
401482	01NS01DC0009	0211	10-JUL-84	3	
401485	00NS01DC0084	0211	10-JUL-84	3	
401488	00NS01DD0037	0211	11-JUL-84	4	
401491	00NS01DDSPIK	0211	11-JUL-84	3	HABITANT CREEK (SPI
401494	00NS01DD0039	0211	11-JUL-84	4	CANARD RIVER
401497	00NS01DD0036	0211	12-JUL-84	4	
401535	00NB00000000	0079	16-JUL-84	5	MACTAQUAC SITE # 35
401712	21NF02ZM0001	0214	17-JUL-84	2	
401742	21NF02ZM0001	0214	24-JUL-84	2	BOTTLE # 3

TOTAL # OF COMPLETED SAMPLES 263

TOTAL # OF INCOMPLETED SAMPLES 865

TOTAL # OF SAMPLES ON NEXT SUPER IS 0

LABS-11 FILE - PARAMETERS TO BE ANALYZED 22-Aug-84

PARAMETER	DESCRIPTION	# TESTS
0201 L	COLOUR APPARENT (REL. UNITS)	248
0204 L	SPECIFIC CONDUCTANCE (USIE/CM)	280
0207 L	TURBIDITY (JTU)	248
06076L	CARBON TOTAL ORG. (MG/KG)	97
0610 L	CARBON DISSOLVED ORGANIC (MG/L)	214
0653 L	PHENOLIC MATERIAL (MG/L)	14
0658 L	HUMIC ACID (MG/L)	80
0711 L	NITROGEN DISSOLVED NO3 & NO2 (MG/L)	325
07310L	NITROGEN NITRATE IC (mg/l)	26
0760 L	NITROGEN TOTAL (MG/L)	223
0772 L	UREA (MG/L)	14
0910 L	FLUORIDE DISSOLVED (MG/L)	50
1010 L	ALKALINITY TOTAL (MG/L)	184
1011 L	ALK-GRAN TITRATION (MG/L)	131
10110L	ALK-GRAN TITRATION (MG/L)	44
1030 L	pH (pH UNITS)	244
1040 L	RESIDUE NONFILTR. (MG/L)	52
1110 L	SODIUM DISSOLVED (MG/L)	532
1210 L	MAGNESIUM DISSOLVED (mg/l)	262
1310 L	ALUMINUM DISSOLVED (MG/L)	29
1330 L	ALUMINUM EXTRACTABLE (MG/L)	25
1330 P	ALUMINUM EXTRACTABLE (MG/L)	93
1410 L	SILICA REACTIVE (MG/L)	227
1510 L	PHOSPHORUS, TOTAL DISS. (MG/L)	29
1541 L	PHOSPHORUS TOTAL (MG/L)	58
1541 P	PHOSPHORUS TOTAL (MG/L)	50
16304L	SULPHATE DISSOLVED (mg/L)	261
16309L	SULPHATE DISSOLVED - BY IC (MG/L)	346
1720 L	CHLORIDE DISSOLVED (MG/L)	170
17812L	HEXACHLOROBENZENE (UG/L)	4
17820L	1,3 DICHLOROBENZENE (UG/L)	4
17821L	1,4 DICHLOROBENZENE (UG/L)	4
17822L	1,2 DICHLOROBENZENE (UG/L)	4
17830L	1,3,5 TRICHLOROBENZENE (UG/L)	4
17831L	1,2,4 TRICHLOROBENZENE (UG/L)	4
17832L	1,2,3 TRICHLOROBENZENE (UG/L)	4
17840L	1,2,3,5 TETRACHLOROBENZENE (UG/L)	4
17841L	1,2,4,5 TETRACHLOROBENZENE (UG/L)	4
17842L	1,2,3,4 TETRACHLOROBENZENE (UG/L)	4
17850L	PENTACHLOROBENZENE (UG/L)	4
18000L	P,P-DDT (UG/L)	15
18005L	O,P-DDT (UG/L)	15
18008L	O,P-DDT SEDIMENTS (MG/KG)	62
18009L	P,P-DDT SEDIMENTS (MG/KG)	62
18010L	p,p'-DDD (p,p'-TDE) (ug/l)	15
18012L	p,p'-DDD (p,p'-TDE) (SED) (ug/l)	62
18020L	P,P-DDE (ug/l)	15
18026L	P,P-DDE SEDIMENTS (MG/KG)	62

TABLE - 7

P E R M A N E N T F I L E L I S T I N G

WELL 'A' SHALLOW PAGE 1

No. 300900 A-SHALLOW

STATION # 10NF02ZM0003 SUB I.D. 0214

DATE OF SAMPLING : 24-MAY-83 TIME : 12:01

PARAMETER	VALUE	DESCRIPTION	DATE	R
88900F		DATE SAMPLE RECEIVED	14-JUN	0
02011L	L5	COLOUR APPARENT (REL. UNITS)	26-MAY	0
20110L	3.5	CALCIUM - DISS (MG/L)	14-JUL	0
10110L	4.3	ALK-GRAN TITRATION (MG/L)	24-JUN	0
26304P	.07	IRON EXTRBLE (MG/L)	15-JUN	0
02073L	1	TURBIDITY (JTU)	26-MAY	0
02041L	56	SPECIFIC CONDUCTANCE (USIE/CM)	26-MAY	0
12102L	.5	MAGNESIUM DISSOLVED (mg/l)	14-JUL	0
19103L	.3	POTASSIUM DISSOLVED (MG/L)	20-JUL	0
11103L	6.8	SODIUM DISSOLVED (MG/L)	20-JUL	0
17205L	8.7	CHLORIDE DISSOLVED (MG/L)	18-JUL	0
14102L	6	SILICA REACTIVE (MG/L)	05-AUG	0
16304L	6.2	SULPHATE DISSOLVED (mg/L)	20-JUL	0
16309L	5.9	SULPHATE DISSOLVED - BY IC (MG/L)	27-JUN	0
07110L	.18	NITROGEN DISSOLVED NO3 & NO2 (MG/L)	28-JUL	0
07601L	.37	NITROGEN TOTAL (MG/L)	24-JUN	0
06107L	1.8	CARBON DISS ORG-COLORIMETRIC (MG/L)	23-JUN	0
06154L	1.4	CARBON DISS INORG-COLORIMETRC (MG/L	23-JUN	0
29305P	.004	COPPER EXTRBL. (MG/L)	08-JUL	0
10301L	6.7	pH (pH UNITS)	26-MAY	0
82302P	L.002	LEAD EXTRBLE. (MG/L)	12-JUL	0
25304P	.03	MANGANESE EXTRBLE (MG/L)	16-JUN	0
30304P	.02	ZINC EXTRBLE (MG/L)	17-JUN	0
15413P	.004	PHOSPHORUS TOTAL (MG/L)	14-JUL	0
15257L	L.001	PHOSPHORUS, DISS INORGANIC (MG/L)	14-JUL	0
10401L	1	RESIDUE NONFILTR. (MG/L)	26-MAY	0
88902L		DATE OF TRANSFER	30-SEP	0
30304L	.02	ZINC EXTRBLE (MG/L)	30-AUG	1

TABLE - 8

I O N B A L A N C E C A L C U L A T I O N

PERMANENT FILE --- STATION # 00NS01E00001 SUBID 0099
DATE OF SAMPLING : 18/06/84 12:30

CALCULATED VALUES (PPM):

CO3= 0	HCO3= 3.7789	OH= 0	MG= .6

CONSTITUENTS (EPM):

CO3= 0	HCO3= .0619	CA= .1173	MG= .0494
F= .002632	CL= .1241	NA= .1131	K= .0051
SO4= .0562	H+= .62593E-03		

SUM OF CATIONS	= .285526	CA+MG	= .1667
SUM OF ANIONS	= .245532	CO3+HCO3+SO4	= .1181
SPEC. COND/100	= .3	SUM OF CONSTITUENTS/COND	= .5301
ANIONS-CATIONS=-.039994= 7.531 %		TOTAL HARDNESS	= 8.338
STANDARD DEV.	= .110306	NON CARBONATE HARDNESS	= 5.238
NA ABSORPTION RATIO	= .390583	CO2	= 3.832
% SODIUM	= 39.6111	SUM OF CONSTITUENTS (PPM)	= 15.90
SATURATION INDEX	=-4.06977	STABILITY INDEX	= 14.33

ALKALINITY GRAN TITRATION WAS USED INSTEAD OF ALKALINITY TOTAL

TABLE - 9

REPORT OF LAB TURN AROUND TIMES
****

REPORT PERIOD: JAN/01/ 1983 - DEC/31/ 1983

FOR SUBID: 099

	#TESTS	#SAMPLES	DELAY1	DELAY2	DELAY3	DELAY4
APR	0	0	0	0	0	0
MAY	0	0	0	0	0	0
JUN	0	0	0	0	0	0
JUL	31	1	35	87	120	33
AUG	56	2	18	73	115	43
SEP	859	31	16	46	66	20
OCT	809	30	14	51	60	9
NOV	820	33	28	75	93	18
DEC	543	24	31	52	68	15
JAN	0	0	0	0	0	0
FEB	0	0	0	0	0	0
MAR	0	0	0	0	0	0

NOTE:
******
DELAY1 --TOTAL(AVERAGE TIME/SAMPLE) / NUMBER OF SAMPLES
DELAY2 --REPORT DATE - DATE SAMPLE RECEIVED
DELAY3 --TRANSFER DATE - DATE SAMPLE RECEIVED
DELAY4 --TRANSFER DATE - REPORT DATE

TABLE 10

REPORT OF LAB TURN AROUND TIMES
****

REPORT PERIOD: APR/01/ 1984 - APR/30/ 1984

PARAMETER	#TESTS	AVG.TIME	MIN TIME	MAX TIME
02011L	88	2	0	7
02041L	88	3	0	7
10301L	103	10	3	29
02073L	87	2	0	4
06107L	129	23	10	80
07110L	96	14	1	56
15413P	26	17	10	21
15257L	15	16	16	16
20110L	97	19	7	67
10101L	25	9	3	21
10110L	72	9	3	21
26304P	69	4	1	6
25304P	72	4	1	6
29305P	51	7	2	13
30304P	70	5	2	8
48302P	33	15	3	20

TABLE 10 - Cont'd

REPORT OF INITIALIZED WATER TYPES

FOR PERIOD: 01-Sep-84 TO 30-Sep-84

****

****

SUBID 0

36 SAMPLES FROM WATER TYPE 00

****

SUBID 85

6 SAMPLES FROM WATER TYPE 01

****

SUBID 211

15 SAMPLES FROM WATER TYPE 00

****

332 SAMPLES IN ALL

TABLE 11

MONTH END REPORT OF REPORTED AND APPROVED SAMPLES
FOR Sep 01,84 TO Sep 30,84

SUBID	PROJ #	DESCRIPTION	TOTAL
0000	13127	GENERAL ANALYSES	1
0079	13127	F&O;FISH CULTURE; B.JESSOP	1
0085	11105	INTERPROV. BASINS; D. LOCKERBIE	2
0086	42000	L.R.T.A.P.;C.W.S.; J. KEREKES	34
0087	42000	WQB-LRTAP-T. CLAIR	49
0099	13126	OVERVIEW NETWORK	62
0145	11105	I.J.C. ST. CROIX R.;G. HOWELL	1
0162	41000	TOXIC CHEMICALS IN PRECIP.	2
0205	11101	I.J.C. ST. JOHN R. BASIN;G. HOWELL	15
0211	41000	TOXIC CHEMICALS GENERAL	119
0214	11103	WATERFORD R. BASIN; T. POLLOCK	49
0231	13127	LRTAP; F&O; D. SCOTT & W. WATT	2
0236	42000	LRTAP	2
0243	13127	M.O.T. CHARLOTTETOWN-AIRPORT;H.BAILEY	3
0244	42000	L.R.T.A.P.; LAKES-D.F.O.; G. LACROIX	19
0246	13100	BRIDGEPORT BASIN STUDY;J. GIBB-W.P.M.	1
0335	13127	QUALITY CONTROL	22
		GRAND TOTAL	384

TABLE 12

SECTION 3

REFERENCED FILES
AND
FILE LAYOUTS

FILES USED BY PROGRAMS

PROGRAMS	FILES	TABLE	PARMS	PRMDES	STNFIL	SUBPAR	PERM1	SAMPLE	TEMP3	INFO	SAMDES
SUPERED		X	X	X	X	X	X	X	X		
LOUIE		X	X	X	X	X			X		
MONTHLY									X		
FIELD					X	X					
LIST		X	X	X	X						
ENTRY		X	X	X				X			
ENTRY1		X	X					X			
WORK		X	X	X							
INIT1		X	X		X	X			X	X	
INCOM1			X	X							
COM		X	X					X			
UNCOM		X	X								
OVERCOM			X								
REPERM				X	X		X				X
SUPER		X	X	X	X			X		X	
DUPTIME		X			X						
TRANS		X	X		X		X				X
IONBAL							X				
BALCAL			X								
VALDAT		X	X	X	X						
LABE							X				

FILES USED BY PROGRAMS (CONT'D)

PROGRAMS	FILES	SNUMS	SUBDES	TOPRINT	REJECTED
SUPERED					
LOUIE					
MONTHLY					
FIELD					
LIST					
ENTRY					
ENTRY1					
WORK					
INIT1					
INCOM1					
COM					
UNCOM					
OVERCOM					
REPERM					
SUPER					
DUPTIME					
TRANS					
IONBAL					
BALCAL					
VALDAT					
LABE					
APPROVED	*	*	*	*	

I N F O R M A T I O N F I L E

(INFO.NEW)

SAMPLE #	INFO

SAMPLE # - Six digit sample # (ie.: 400265)

INFO - Additional Information about the Sample (up to 300 characters)

Organization Indexed Fixed

Primary Key Sample # - No Duplicates

PARAMETER DESCRIPTION FILE

(PRMDES.NEW)

CODE	DESCRIP	LO LIM	UP LIM	LEFT	SIGDIG
(5)	(40)	(6)	(6)	INTEGER	INTEGER

CODE - 5 digit parameter code - eg. 10101

DESCRIP - a description of the test (<40 chars)

LO LIM - lower detection limit for the test

UP LIM - upper detection limit for the test

LEFT - not presently used

SIGDIG - # of significant digits in value of test

Organization Indexed Fixed

Primary Key Code - No Duplicates

P A R M S F I L E

(PARMS.NEW)

SAMPLE #	PARCODE	DATE	VALUE	Q	R
INTEGER	(6)	(6)	(7)	(1)	(1)

SAMPLE # - six digit sample # (ie. 302097)

PARCODE - six character parameter code

- 1-4 are code, ie. 1010
- 5-6 are method, ie. 1L
- 1-6 ie. 10101L

DATE - date of analysis, in DD-MMM format

VALUE - value of the analysis

QUALIFIER - Q in example above

- contains blank if value is OK
- contains L or G if value is less or greater
- connains * if value is depleted, etc.

RECHECK - contains recheck value of parameter

Organization Indexed Fixed

Primary Key - Sample - Duplicates

P E R M A N E N T F I L E

(PERM1.NEW)

FIXED PORTION OF RECORD

#PARM	SAM	STN	FR	SUB	SDATE	I	R	T	PARMS
(4)	(6)	(12)	(3)	(4)	(10)	(4)	(4)	(4)	ARRAY

#PARM - number of parameters on file for this sample

SAM - six digit sample number

STN - 12 character station number

FR - 3 character frequency & precision

SUB - 4 digit subid, ie. 0214

SDATE - 10 digit date and time of sampling

I - 4 character initialization date - DDMM

R - 4 character date of report - DDMM

T - 4 character date of transfer - DDMM

PARMS - described in detail on next screen

Organization Indexed Variable

Record Size 1951

Primary Key Stn - Duplicates

Alternate Key Sub. I.D.

Alternate Key Sam

P E R M A N E N T F I L E - P A R M S

(PERM1.NEW)

VARIABLE PORTION OF RECORD

PARCODE	ADATE	QUAL	PVALUE	RCHK
(6)	(4)	(1)	(7)	(1)

PARMS is an array with #PARM elements, numbered from 0 to #PARMS-1. Each element of the array has the above format.

PARCODE - 6 character parameter code with analysis type e.g. 10101L

ADATE - date of analysis on the parameter, in the form DDMM, eg. 0410 is Oct. 10

QUAL - 1 character qualifier for the value

PVALUE - 7 character string containing the value for that parameter

RCHK - recheck value for that parameter

R E J E C T E D

(REJECTED.NEW)

NP	D	DOUB(100)
(2)	(3)	(6)

NP - "01"

D - Record Counter

DOUB(X) - Array Containing Duplicate Sample #'s

Organization Indexed Variable

Primary Key NP - Duplicates

S A M P L E F I L E

(SAMPLE.NEW)

SAMPLE

----

(6)

SAMPLE - Six Digit Sample # (400300)

Organization Indexed Fixed

Primary Key Sample - No Duplicates

S A M P L E D E S C R I P T I O N F I L E

(SAMDES.NEW)

SAMPLE	SAMDES
(6)	(40)

SAMPLE - Six digit sample # (ie: 400350)

SAMDES - Description of Sampling Location
(Max. of 40 characters)

Organization Indexed Fixed

Primary Key Sample - No Duplicates

S N U M S

(SNUMS.NEW)

SAMPLE	SUBID	BDATE
(6)	(4)	(6)

SAMPLE - Six Digit Sample # (i.e.: 400600)

SUBID - Four Character SUBID (i.e.: 0145)

BDATE - Date Sample Reported (DDMMYY)

Organization Indexed Fixed

Primary Key Sample

Alternate Key SUBID - Duplicates

S T A T I O N D E S C R I P T I O N F I L E

(STNFIL.NEW)

STATION	W.R. STN	STN DESCRIPTION
(12)	(7)	(64)

STATION - 12 digit station # eg. 00NB01AD0001

W.R. STN - 7 digit water resources station # (if applicable)

DESCRIPTION - description of station (<64 chars)

Organization Indexed Fixed

Primary Key Station - No Duplicates

S U B D E S

(SUBDES.NEW)

SUBNUM	PROJNUM	PROJDES
(4)	(5)	(40)

SUBNUM - Four Character SUBID # (i.e.: 0099)

PROJNUM - Five Digit Project #

PROJDES - Project Description (Max 40 Characters)

Organizatton Index Fixed

Primary Key SUBNUM - No Duplicates

S U B I D P A R A M E T E R L I S T F I L E

(SUBPAR.NEW)

SUBID	PCODE	PCODE	PCODE	~~~~~	PCODE
(4)	(6)	(6)	(6)		(6)

SUBID - 4 digit subid number

PCODE - 6 digit parameter code

The parameter codes are stored in an array of size 100, with each element 6 characters long. Elements not containing a valid parameter code are filled with blanks.

Organization Indexed Fixed

Primary Key Sub I.D. - No Duplicates

T A B L E F I L E

(TABLE.NEW)

SAM #	# PAR	SUB	STN	DATE	F	ZONE	DESCRIPT
INTEGER	INTEGER	(4)	(12)	(10)	(3)	(3)	(40)

S # - 6 digit sample number, eg. 302093

PAR - number of parameters for this sample

SUB - a 4 digit subid number, eg. 0214

STN - a 12 digit station #, eg. 00NB01AD0001

DATE - date of sampling in format DDMMYY

- time of sampling in form HHMM

F - frequency and precision of sample

ZONE - 3 character timezone - eg. ADT

DESCRIPT - description of sample - < 40 chars

Organization Indexed Fixed

Primary Key Sample - No Duplicates

Alternate Key Sub I.D. - Duplicates - Changes

Alternate Key Stn - Duplicates - Changes

T E M P 3 . F I L E

(TEMP3.NEW)

SAM	STN	SUBID	RECDATE	TODATE
(6)	(12)	(4)	(6)	(9)

SAM - Six Digit Sample # (ie: 400500)

STN - 12 Character Station Number

SUBID - 4 Character Sub ID

RECDATE - Date Sample Received (ie: 23-JAN)

TODATE - Current Date Provided by the Operating System (ie: 01-JAN-84)

Organization Indexed Fixed

Primary Key Sam - No Duplicates

T O P R I N T

(TOPRINT.NEW)

NK	SA	TOPRINT 930,150)
(2)	(INTEGER)	(6)

NK - "01" (Two Characters)

SA - Record Counter

TOPRINT - Array Containing SUBID and Sample #'s to be printed

Organization Indexed Fixed

Primary Key NK

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